Attachment 8: Quality Assurance

County-Wide Groundwater Elevation Monitoring Program
Local Groundwater Assistance Program Grant Application

General Review and QA/QC

Mojave Water Agency (MWA) has established a number of procedures to ensure products of this project will be accurate. All final products and reports corresponding to the five tasks in the Work Plan will be reviewed by MWA staff. Additionally, specific quality assurance procedures are in place for certain tasks.

The project will be managed by Lance Eckhart, Principal Hydrogeologist, and Tony Winkel, Senior Hydrogeologist with Mojave Water Agency. Mr. Eckhart is a Registered Geologist and Certified Hydrogeologist. Mr. Winkel is a licensed Professional Engineer in Civil Engineering. Their professional registrations are attached, along with a statement of qualifications regarding MWA's competency to administer the CASGEM program (Att8_LGA12_Mojave_QA_2of5).

Procedures for Sampling Water Levels

Water level data will be utilized in Task 2 of the Work Plan, and future water level measurements will be collected pursuant to the Monitoring Plan developed in Task 4. MWA Field Staff, who perform water level field measurements, follow strict defensible procedures as outlined in the MWA Field Sampling Plan (MWA, 2008). Selected text from the field sampling plan is provided in Att8_LGA12_Mojave_QA_3of5 (most of the sampling plan pertains to water quality; only pages regarding water levels were included and strikeouts indicate sections that are not relevant to this project). In addition, and as part of MWA's cooperation with the United States Geological Survey (USGS), MWA field staff is trained and audited annually on data collection techniques by the USGS. The audit focusses on water quality sampling, an essential component of which includes measuring groundwater levels. As a result of this training, the USGS has repeatedly found that "MWA personnel once again demonstrated sound, defensible water-quality techniques. Water-quality data collection adhered to USGS protocols." (USGS, 2010). MWA will continue to follow strict defensible protocols in data collection in its ongoing monitoring efforts and participation in the CASGEM Program. The USGS audit letters are contained in Att8_LGA12_Mojave_QA_4of5.

Procedures for Determining Alternate Monitoring Qualification

In Task 1, basins will be evaluated to determine whether they qualify for "Alternate Monitoring" under CASGEM. Alternate Monitoring is allowed under Water Code Section 10932, whereby direct groundwater elevation monitoring is not required if one of the following conditions is met:

1. Groundwater elevations are unaffected by land use activities or planned land use activities, or naturally occurring total dissolved solids within the groundwater preclude the use of that water.
2. It is underlying land that is wholly owned or controlled, individually or collectively, by state, tribal, or federal authorities, and groundwater monitoring information is not available or was requested from, but not provided by, the state, tribal, or federal authorities.
3. It is underlying an area where geographic or geologic features make monitoring impracticable, including, but not limited to, a basin or subbasin that is inaccessible to well-drilling equipment.

MWA has developed a methodology to conduct Alternate Monitoring evaluations, including an estimate of the water use in the groundwater basins utilizing remote sensing technology (aerial imagery) combined with Geographic Information System (GIS) software and parcel datasets. This methodology has been reviewed and tentatively accepted by DWR's Glendale office. The same methodology will be utilized by the consultant to evaluate the 44 groundwater basins, determine their eligibility for Alternate Monitoring,

and as applicable, will generate Alternate Monitoring reports. A sample Alternate Monitoring report for the Means Valley Basin (DWR Basin 7-17) is attached, and includes a description of the procedures, methodologies and water use calculations (Att8_LGA12_Mojave_QA_5of5).